LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1.   (Currently Amended) A network device comprising:

an output port;

a control unit coupled to the output port;

a queue configured to store a copy of a packet forwarded to the output port; and

a memory coupled to the output port,

> wherein the output port is configured to output packets for transmission
>> via a network tunnel,
>
> wherein the network tunnel aggregates a plurality of flows,
>
> wherein the memory is configured to store information, ~~and~~
>
> wherein the information identifies packets which have been forwarded via
>> the network tunnel, and
>
> wherein the queue indicates how many packets in each of the flows are
>> outstanding within the network tunnel.

2.   (Canceled)

3.   (Canceled)

4.   (Currently Amended) The network device of claim [[3]] 1, wherein

the memory is comprised in the control unit; and

the control unit is configured to update the information in the memory to indicate
> that the packet was sent via the network tunnel, in response to forwarding
> the packet to the output port.

5.   (Currently Amended) The network device of claim [[3]] 1, wherein

the control unit is configured to send ~~recirculate~~ a copy of the packet to a
> loopback port with which the queue is associated, and

the copy of the packet is stored in the queue in response to the packet being
> receiving by the loopback port ~~recirculated~~.

6.   (Currently Amended) The network device of claim [[3]] 1, wherein
the control unit is configured to identify a flow of [[a]] the plurality of flows
        being aggregated for transmission via the network tunnel,
the flow comprises a particular packet, and
the control unit is configured to select whether the particular packet is admitted to
        the network tunnel based on which the flow comprises in which the
        particular packet is comprised.

7.   (Original) The network device of claim 6, wherein
the control unit is configured to drop the particular packet if the flow currently has
        a threshold number of packets stored in the queue; and
the control unit is configured to admit the particular packet for transmission via
        the network tunnel if the flow currently has fewer than the threshold
        number of packets stored in the queue.

8.   (Currently Amended) The network device of claim [[3]] 1, wherein
the control unit is configured to forward the copy of the packet stored in the queue
        to the output port for retransmission via the network tunnel if the packet is
        dropped in the network tunnel.

9.   (Original) The network device of claim 8, wherein
the control unit is configured to determine that the packet was dropped in the
        network tunnel in response to the information stored in the memory and in
        response to information received from another network device.

10.   (Original) The network device of claim 8, wherein
the control unit is configured to send the copy of the packet stored in the queue
        via the network tunnel if the copy of the packet is dropped in the network
        tunnel.

11. (Currently Amended) The network device of claim [[3]] 1, wherein

the control unit is configured to control a usage level of the queue by adjusting a
      rate at which packets are removed from the queue, and

the control unit is configured to admit a particular packet for transmission via the
      network tunnel based on the usage level of the queue.

12. (Original) The network device of claim 11, wherein

the control unit is configured to reduce the rate at which packets are removed
      from the queue if the usage level of the queue exceeds a threshold usage
      level.

13. (Currently Amended) The network device of claim [[3]] 1, wherein

the control unit is configured to forward a new packet to the output port for
      transmission via the network tunnel if no packets have been transmitted
      via the network tunnel for a period of time.

14. (Currently Amended) A network device comprising

an input port configured to receive a packet conveyed via a network tunnel;

a deferred forwarding queue; and

a control unit coupled to the input port and the deferred forwarding queue,

      wherein the control unit is configured to: detect reception of the packet by
            the input port, and generate information, ~~and~~

      wherein the information indicates whether the packet is a particular
            packet,

      wherein the control unit is configured to store the packet in the deferred
            forwarding queue, if the packet is received out-of-order, and

      wherein the information indicates a capacity of the deferred forwarding
            queue.

15. (Original) The network device of claim 14, wherein

the particular packet is an expected packet.

16. (Original) The network device of claim 14, wherein

the control unit is configured to include the information in a tunnel update packet, and

the tunnel update packet includes a sequence number of a next packet expected to be received by the network device.

17.   (Original) The network device of claim 14, further comprising:

an output port, wherein

the control unit is configured to forward the tunnel update packet to the output port for transmission to another network device that handles packets being conveyed in the network tunnel.

18.   (Canceled)

19.   (Currently Amended) The network device of claim [[18]] 14, wherein

the control unit is configured to remove the packet from the deferred processing queue in response to receiving and processing at least one packet, and

the at least one packet is earlier in a sequence of packets than the packet.

20.   (Currently Amended) The network device of claim 19, wherein

the control unit is configured to send recirculate the packet to a loopback port in response to removing the packet from the queue, and

the control unit is configured to forward the packet in response to the packet being received by the loopback port recirculated.

21.   (Original) The network device of claim 14, wherein

the control unit is configured to generate the information in response to the input port receiving a plurality of packets via the network tunnel.

22.   (Currently Amended) A system comprising:

a network tunnel;

an ingress network device coupled to send packets via the network tunnel, and

an egress network device coupled to receive packets sent via the network tunnel, wherein

the egress network device is configured to provide information to the
ingress network device, and

the information indicates whether a packet transmitted from the ingress
network device to the egress network device was dropped in the
network tunnel and a capacity of a deferred forwarding queue
within the egress network device.

23. (Original) The system of claim 22, wherein

the ingress network device is configured to retransmit the packet to the egress
network device if the packet is dropped in the network tunnel.

24. (Currently Amended) The system of claim [[24]] 22, wherein

the ingress network device comprises a queue,

the ingress network device is configured to store a copy of each packet sent via
the network tunnel in the queue, and

the ingress network device is configured to remove a copy of a particular packet
from the queue in response to the information indicating reception of the
particular packet by the egress network device.

25. (Original) The system of claim 24, wherein

the ingress network device is configured to adjust a rate at which packets are
transmitted via the network tunnel if the information indicates that the
packet was dropped.

26. (Original) The system of claim 24, wherein

the ingress network device is configured to apply a packet drop algorithm to
packets being transmitted via the network tunnel, and

the packet drop algorithm differentiates between different packet flows being
aggregated for transmission via the network tunnel.

27. (Currently Amended) The system of claim 23, wherein

the egress network device comprises a queue, and

the egress network device is configured to store the packet in the <u>deferred</u>
<u>forwarding</u> queue if the packet is received out of sequence.

28.   (Currently Amended) The system of claim 27, wherein

the egress network device is configured to remove the packet from the<u>deferred</u>
<u>forwarding</u> queue in response to receiving and processing at least one
packet, wherein

the at least one packet is earlier in a sequence of packets than the packet;
and

the egress network device is configured to forward the packet in response to
removing the packet from the queue.

29.   (Currently Amended) A method comprising:

sending a packet via a network tunnel from a first network device<u>, wherein the</u>
<u>network tunnel aggregates a plurality of flows</u>;

<u>storing a copy of the packet in a queue, in response to the packet being sent via</u>
<u>the network tunnel, wherein the queue indicates how many packets in each</u>
<u>of the flows are outstanding within the network tunnel;</u> and

determining whether the packet is dropped in the network tunnel.

30.   (Canceled)

31.   (Currently Amended) The method of claim [[30]] <u>29</u>, wherein the storing
the copy of packet in the queue comprises:

~~recirculating~~ <u>sending</u> the copy of the packet <u>to</u> ~~via~~ a <u>loopback</u> port <u>of the</u>
<u>first network device, wherein the loopback port is</u> associated with
the queue.

32.   (Currently Amended) The method of claim [[30]] <u>29</u>, further comprising:

removing the copy of the packet from the queue if the determining whether the
packet is dropped in the network tunnel determines that the packet was
successfully received at an egress of the network tunnel.

33.   (Currently Amended) The method of claim [[30]] 29, further comprising:
sending the copy of the packet from the queue via the network tunnel if the packet
   is dropped in the network tunnel.

34.   (Currently Amended) The method of claim [[30]] 29, further comprising:
identifying a flow of [[a]] the plurality of flows being aggregated for transmission
   via the network tunnel, wherein the flow comprises a particular packet;
   and
selecting whether the particular packet is admitted to the network tunnel based on
   which the flow comprises in which the particular packet is comprised.

35.   (Currently Amended) The method of claim [[30]] 29, further comprising:
controlling a usage level of the queue; and
admitting a particular packet for transmission via the network tunnel dependent
   on the usage level of the queue, wherein the controlling the usage level of
   the queue comprises: adjusting a rate at which packets are removed from
   the queue.

36.   (Original) The method of claim 29, further comprising:
sending information to the first network device, wherein the information indicates
   whether the packet was dropped in the network tunnel.

37.   (Currently Amended) The method of claim 36, further comprising:
storing the packet in an egress queue if the packet is received out of sequence by a
   second network device.

38.   (Currently Amended) The method of claim [[36]] 37, further comprising:
removing the packet from the egress queue in response to receiving at least one
   packet via the network tunnel, wherein
   the at least one packet is earlier in a sequence of packets than the packet;
      and
forwarding the packet in response to the removing the packet from the queue.

39.   (Currently Amended) A method comprising:

receiving a packet being conveyed via a network tunnel;

storing the packet in a deferred forwarding queue, if the packet is received out of
    sequence; and

sending information to a network device, wherein

the information indicates successful receipt of the packet and a capacity of
    the deferred forwarding queue.

40.   (Original) The method of claim 39, wherein

the information is sent in response to receiving a plurality of packets via the

network tunnel.

41.   (Canceled)

42.   (Currently Amended) The method of claim [[42]] 39, further comprising:

removing the packet from the deferred forwarding queue in response to receiving

at least one packet via the network tunnel, wherein

the at least one packet is earlier in a sequence of packets than the packet;
        and

forwarding the packet in response to removing the packet from the deferred

forwarding queue.

43.   (Currently Amended) The method of claim 42, wherein

removing the packet from the queue comprises sending recirculating the packet to

a loopback port, wherein the packet is forwarded in response to being

received by the loopback port.

44.   (Original) The method of claim 39, further comprising:

sending the packet via the network tunnel; and

determining whether the packet is dropped in the network tunnel based on the

information.

45.   (Original) The method of claim 44, further comprising:

storing a copy of the packet in a queue in response to sending the packet via the
network tunnel.

46.   (Original) The method of claim 45, further comprising:
sending the copy of the packet from the queue via the network tunnel if the packet
is dropped in the network tunnel.

47.   (Original) The method of claim 44, further comprising:
selecting whether a particular packet is admitted to the network tunnel dependent
on which one of a plurality of flows being aggregated for transmission via
the network tunnel comprises the particular packet.

48.   (Currently Amended) A system comprising:
means for sending a packet via a network tunnel from a first network device,
wherein the network tunnel aggregates a plurality of flows;
means for storing a copy of the packet in a queue, in response to the packet being
sent via the network tunnel, wherein the queue indicates how many
packets in each of the flows are outstanding within the network tunnel;
and
means for determining whether the packet is dropped in the network tunnel.

49.   (Canceled)

50.   (Currently Amended) The system of claim [[49]] 48, wherein storing the
copy of packet in the queue comprises:
recirculating sending the copy of the packet via a loopback port associated
with the queue.

51.   (Currently Amended) The system of claim [[49]] 48, further comprising:
means for removing the copy of the packet from the queue if it is determined that
the packet was successfully received at an egress of the network tunnel.

52.   (Currently Amended) The system of claim [[49]] 48, further comprising:

means for sending the copy of the packet from the queue via the network tunnel if the packet is dropped in the network tunnel.

53.   (Currently Amended) The system of claim [[49]] 48, further comprising:
means for identifying a flow of [[a]] the plurality of flows being aggregated for transmission via the network tunnel, wherein the flow comprises a particular packet; and
means for selecting whether the particular packet is admitted to the network tunnel based on the flow in which the particular packet is comprised.

54.   (Currently Amended) The system of claim [[49]] 48, further comprising:
means for controlling a usage level of the queue; and
means for admitting a particular packet for transmission via the network tunnel dependent on the usage level of the queue, wherein controlling the usage level of the queue comprises:
adjusting a rate at which packets are removed from the queue.

55.   (Currently Amended) A system comprising:
means for receiving a packet being conveyed via a network tunnel;
means for storing the packet in a deferred forwarding queue, if the packet is received out of sequence; and
means for sending information to a network device, wherein
the information indicates successful receipt of the packet and a capacity of the deferred forwarding queue.

56.   (Original) The system of claim 55, wherein
the information is sent in response to receiving a plurality of packets via the network tunnel.

57.   (Canceled)

58.   (Currently Amended) The system of claim [[57]] 56, further comprising:

means for removing the packet from the <u>deferred forwarding</u> queue in response to
     receiving at least one packet via the network tunnel, wherein
     the at least one packet is earlier in a sequence of packets than the packet;
          and

means for forwarding the packet in response to removing the packet from the
     <u>deferred forwarding</u> queue.

59.   (Currently Amended) The system of claim [[57]] <u>56</u>, wherein
removing the packet from the queue comprises <u>sending</u> ~~recirculating~~ the packet <u>to</u>
     <u>a loopback port</u>.

60.   (Currently Amended) A computer readable medium comprising program
instructions executable to:

send a packet via a network tunnel from a first network device<u>, wherein the</u>
     <u>network tunnel aggregates a plurality of flows</u>;

<u>store a copy of the packet in a queue, in response to the packet being sent via the</u>
     <u>network tunnel, wherein the queue indicates how many packets in each of</u>
     <u>the flows are outstanding within the network tunnel;</u> and

determine whether the packet is dropped in the network tunnel.

61.   (Cancelled)

62.   (Currently Amended) The computer readable medium of claim [[61]] <u>60</u>,
wherein storing the copy of packet in the queue comprises:

     ~~recirculating~~ <u>sending</u> the copy of the packet ~~via~~ <u>to</u> a <u>loopback</u> port
          associated with the queue.

63.   (Currently Amended) The computer readable medium of claim [[61]] <u>60</u>,
wherein the program instructions are further executable to:

remove the copy of the packet from the queue if it is determined that the packet
     was successfully received at an egress of the network tunnel.

64.   (Currently Amended) The computer readable medium of claim [[61]] 60, wherein the program instructions are further executable to:

    send the copy of the packet from the queue via the network tunnel if the packet is dropped in the network tunnel.

65.   (Currently Amended) The computer readable medium of claim [[61]] 60, wherein the program instructions are further executable to:

    identify a flow of [[a]] the plurality of flows being aggregated for transmission via the network tunnel, wherein the flow comprises a particular packet; and

    select whether the particular packet is admitted to the network tunnel based on the flow in which the particular packet is comprised.

66.   (Currently Amended) The computer readable medium of claim [[61]] 60, wherein the program instructions are further executable to:

    control a usage level of the queue; and

    admit a particular packet for transmission via the network tunnel dependent on the usage level of the queue, wherein

        controlling the usage level of the queue comprises:

            adjusting a rate at which packets are removed from the queue.

67.   (Currently Amended) A computer readable medium comprising program instructions executable to:

    receive a packet being conveyed via a network tunnel;

    store the packet in a deferred forwarding queue, if the packet is received out of sequence; and

    send information to a network device, wherein

        the information indicates successful receipt of the packet and a capacity of the deferred forwarding queue.

68.   (Original) The computer readable medium of claim 67, wherein

    the information is sent in response to receiving a plurality of packets via the network tunnel.

69.   (Canceled)

70.   (Currently Amended) The computer readable medium of claim [[69]] 67, wherein the program instructions are further executable to:

remove the packet from the <u>deferred forwarding</u> queue in response to receiving at
least one packet via the network tunnel, wherein
the at least one packet is earlier in a sequence of packets than the packet;
and
forward the packet in response to removing the packet from the<u> deferred
forwarding</u> queue.

71.   (Currently Amended) The computer readable medium of claim [[69]] 67, wherein

removing the packet from the queue comprises <u>sending</u> ~~recirculating~~ the packet <u>to
a loopback port</u>.